

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
EWSD	9
GTD-5	1.6.3.3
DMS-10	404.3
1AESS	1AE8A
5ESS	5E4.2*
DMS-100	BCS29**

Note: * In the 5ESS, this feature requires the non-standard pre-ISDN arrangement using the ISDN 1 Message AP/ACP or 3A translator with the 5E4.2 Generic.

** In the DMS-100, BCS29 supports this feature on Residential Enhanced Services (RES).

2. This feature can only be offered on an Intraoffice basis.
3. The ESP's CPE used to receive and interpret the SMDI data must use the same signaling, control, and data communications protocol as the telephone office Input/Output channel. This channel uses a standard Electronic Industries Association (EIA) RS232 asynchronous 1200-baud ASCII interface.
4. Reference for SMDI:
 - o TR-TSY-000283, Simplified Message Desk Interface (SMDI) Generic Requirements, Issue 2, May 1991, Supplement 1, December 1991.

This service, if offered as a BSE, may be associated with the Dedicated Network Access Link and Circuit Switched Line basic serving arrangement.

Message Waiting Indicator - Activation (Audible)

This capability allows an ESP to indicate to its subscriber that a message is waiting for retrieval. With this capability, the ESP can activate an audible signal, e.g., stutter dial tone, on the ESP's client's line.

Activation of message waiting can be provided in limited switch types. The technology used is the same technology which supports the SMDI product. The input/output (I/O) port is used to recognize incoming messages from the ESP. Those incoming messages direct the switch to activate a message waiting indication on an ESP's client's line.

Generic Name of ONA Service	GTE Product Name	BSE or CNS
Message Waiting Indicator - Activation (Audible)	Message Waiting Indication - Audible	BSE

FEATURE OPERATION:

1. An ESP's client can use call forwarding busy line (CFBL), call forwarding don't answer (CFDA), or call forwarding variable (CFV) to forward their calls to the ESP.
2. With appropriate line translations in Stored Program Control switches, an ESP can turn on or off a special recall dial tone (stutter dial tone) to notify their clients of an awaiting message. Whenever the client attempts to originate a call, the client receives stutter dial tone. This indicates to the client that a message(s) has been received by the ESP for the client. The client will receive stutter dial each time a call is attempted until the ESP sends a message to the switch to remove the stutter dialtone (MWI).
3. Messages to turn on/turn off the Message Waiting Indicator (MWI) are sent to the central office on an SMDI-type data link.
4. If the client DN does not have the MWI option assigned, is not a valid DN, or if the switch does not have enough resources to carry out the message waiting function, a message is sent to the ESP via the Input/Output channel.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
EWSD	9
GTD-5	1.6.4.1
DMS-10	404.3
1AESS	1AE8A
5ESS	5E4.2*
DMS-100	BCS29**

Note: * In the 5ESS, this feature requires the non-standard pre-ISDN arrangement using the ISDN 1 Message AP/ACP or 3A translator with the 5E4.2 Generic.

** In the DMS-100, BCS29 supports this feature on Residential Enhanced Services (RES).

2. This feature can only be offered on an Intraoffice basis.

3. References for MWI:

- o TR-TSY-000283, Simplified Message Desk Interface (SMDI) Generic Requirements, Issue 2, May 1991, Supplement 1, December 1991.

This service, if offered as a BSE, may be associated with the Dedicated Network Access Link and Circuit Switched Line basic serving arrangement.

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1. Appendix 1 - Region Specific Services - Technical Descriptions for Circuit Switched Serving Arrangements

Anonymous Call Rejection

This capability provides the ESP's client with the ability to reject calls from parties that have activated the Cancel Calling Number Delivery feature to prevent the display of their telephone numbers. When ACR is activated, such calls will be routed to an announcement which tells the calling party that the called party will not accept calls from callers who have chosen to prevent the display of their telephone numbers. The calling party will be instructed to hang up and place the call again, without activating the Cancel Calling Number Delivery feature.

GTE Product Name	BSE or CNS
Anonymous Call Rejection	CNS

FEATURE OPERATION:

To activate or deactivate anonymous call rejection, the ESP's client dials a preassigned activation code in the form of *XX.

1. Dialing an activation code. A dial tone is provided, and then the ESP's client inputs the activation code in the form *XX (or 11XX on a rotary dial telephone). A recording or confirmation tone will notify the ESP's client that Anonymous Call Rejection is ON.
2. Dialing the deactivation code. A dial tone is provided, then the ESP's client inputs the Anonymous Call Rejection deactivation code in the form of *XX (or 11XX on a rotary dial telephone). A recording or confirmation tone will notify the ESP's client that Anonymous Call Rejection is OFF.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.2
EWSD	9
GTD-5	17.2.2
DMS-10	406.1
1AESS	1AE9
5ESS	5E9.1
DMS-100	BCS32

Billed Number Screening

This capability provides Enhanced Service Providers (ESPs) with the ability to prevent third number calls from being billed to their switched access billing accounts (e.g., DID numbers). This capability is provided by the operating procedures of a LEC providing operator services capabilities.

When a call is made to a LEC operator services system, and the caller requests the charges be billed to a third number, the operator makes a call to the third number for verification that the charges will be accepted. If no answer is received when the third number is called for verification of billing acceptance, the bill to third request is rejected.

In some areas, when a call is made to a LEC operator services system, and the caller request the charges be billed to a third number, the operator queries the Line Information Database (LIDB) to determine the billed party's preference concerning bill to third number requests. If the information in the LIDB indicates to always reject bill to third party attempts, then the bill to third request is rejected.

GTE Product Name	BSE or CNS
Billed Number Screening	BSE or CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	14.1
EWSD	9
GTD-5	1.6.2.1
VIDAR	7.0.1.2
ITT-1210	7.2
DMS-10	208.1
1AESS	1AE9
5ESS	5E4
DMS-100	BCS30
#2EAX	1.2.9.1

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This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Busy Number Redial

This capability provides the ESP's client with the ability to dial a redial activation code when a busy line is reached. The number is then retried automatically until both parties are available.

GTE Product Name	BSE or CNS
Busy Number Redial	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.2
EWSD	9
GTD-5	1.6.2.1
DMS-10	404.4
1AESS	1AE9
5ESS	5E5
DMS-100	BCS30

2. Only busy calls within the central office are retried automatically.

Call Forwarding Busy No Answer - Fixed

This feature is a permanently activated service which automatically redirects calls place to an ESP client's telephone number to another telephone number subscribed to by the LEC's customer, if the caller encounters either a no-answer condition after a specified number of rings or a normal busy-line condition.

GTE Product Name	BSE or CNS
Call Forward Busy-Line/No Answer - Fixed	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	15.1
EWSD	9
GTD-5	1.6.2.1
DMS-10	305.2
1AESS	1AE9
5ESS	5E5
DMS-100	BCS30
#2EAX	1.2.9.1

2. When call forwarding busy/no answer-fixed is active, the ESP's client's ability to originate calls will be unaffected.

Call Forwarding - Fixed (All Calls)

This capability provides the ESP's client with the ability to redirect all incoming calls to another location on a different premises. This service is permanently activated and the customer's preselected forward-to number is pre-programmed in the network via service order.

GTE Product Name	BSE or CNS
Call Forwarding - Fixed	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	14.1
EWSD	9
GTD-5	1.6.2.1
VIDAR	7.0.1.2
ITT-1210	7.2
DMS-10	305.2
1AESS	1AE9
5ESS	5E5
DMS-100	BCS30
#2EAX	1.2.9.1

Call Restriction Service

This capability provides the ESP's client with the ability to restrict one plus (1+ and 10+XXX), International (011+), zero plus (0+) and/or zero minus (0-), and 900 prefix calling. Restricted calls are directed to a central office announcement.

GTE Product Name	BSE or CNS
Call Restriction Service	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	15.1
EWSD	9
GTD-5	1.6.2.1
VIDAR	7.0.1.2
DMS-10	402.52
1AESS	1AE9
5ESS	5E4
DMS-100	BCS30
#2EAX	1.2.9.1

2. Toll Restriction will not be provided on party lines or CentraNet(R) lines.

Call Waiting

This capability provides a burst of tone to a busy station user to indicate to the ESP's client that another call is waiting. The busy station user may hang up and answer the second call or can place the original call on hold and answer the second call.

GTE Product Name	BSE or CNS
Call Waiting	CNS

FEATURE OPERATION:

An incoming call to a busy line with CW receives audible ringing. The line with call waiting receives a CW tone that is repeated once about 10 seconds after the initial burst of tone.

The line with CW may respond to the CW tone in one of three ways. The called party may disconnect from the existing call. The telephone will then be rung and, if answered, the called party will be connected to the waiting call. The second alternative allows the line with Call Waiting to flash the switch-hook (.75 to 1.5 seconds) and, thereby, place the original call on hold and connect to the incoming call. The party with CW may alternate between calls by flashing the switch-hook. The third alternative is not to respond to the CW tone.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	14.1
EWSD	9
GTD-5	1.6.2.1
VIDAR	7.0.1.2
ITT-1210	7.2
DMS-10	210.4
1AESS	1AE8
5ESS	5E2
DMS-100	BCS17
#2EAX	1.2.9.1

2. If a line has Call Forwarding Busy Line (CFBL) and CW, the CW service normally takes precedence.

3. Given that a line has both CFBL and CW and is in the talk state, the first call attempting to terminate is treated as a CW call. Subsequent termination attempts are call forwarded.
4. On a line with both a make-busy key and CW, make-busy key takes precedence when the key is activated.
5. References:
 - o LSSGR (FR-NWT-000064), FSD 01-02-1201 Call Waiting, Issue 1, October 1989, Revision 1, June 1991, TR-TSY-000571.
 - o Business Group Call Waiting FSD 01-02-1205, Issue 1, October 1989, TR-TSY-000573.
 - o TR-TSY-000219 CLASS sm Feature: Distinctive Ringing/Call Waiting, LSSGR FSD 01-01-1110, Issue 2, November 1988, Revision 1, May 1992.

Customer Controllable Ringing

This capability provides the ESP's client with the ability to adjust the number of ring cycles that are used prior to forwarding a call in a "No Answer" situation.

GTE Product Name	BSE or CNS
Customer Controllable Ringing	CNS

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17
EWSD	9
GTD-5	1.6.2.3
DMS-10	404.3
1AESS	1AE9
5ESS	5E4

2. To select the number of rings desired (1-9), the customer will dial a special access code and then input a digit that corresponds to the number of ring cycles desired before the forwarding takes place.

GTE Dial DataLink(R) Service

This capability provides the ESP's client with an enhancement to their local facilities to provide higher quality transmission standards than normally provided for voice transmission. It is designed for customer requesting a better grade of service for data transmission.

GTE Product Name	BSE or CNS
GTE Dial DataLink(R)	CNS

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. The quality of the line is guaranteed only between the customer point of demarcation and the serving central office switch. No guarantee is made for a transmission level over the entire circuit.
2. GTE Dial DataLink(R) Service is not offered in conjunction with the following:
 - Foreign Central Office Service
 - Foreign Exchange Service
 - CentraNet(R) Service
 - Call Waiting
 - Off-Premise Extensions
 - PBX Trunks or stations
 - Residence or Business service provided by analog station carrier (e.g., 82A & 84A)
 - Smart Ring(sm)

GTE Dial DataLink(R) and CentraNet(R) are registered trademarks of GTE Telephone Operations

Smart Ring(sm) is a service mark of GTE Telephone Operations

Last Number Redial

This capability provides the ESP's client to dial an activation code and automatically place a call to the last called number. Each time the ESP's client dials, using the activation code, the most recent number is stored.

GTE Product Name	BSE or CNS
Last Number Redial	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.2
EWSD	9
GTD-5	1.6.2.1
DMS-10	404.2
1AESS	1AE9
5ESS	5E5
DMS-100	BCS30

2. When last number redial is active, the ESP's client's ability to receive calls will be unaffected.

MegaConnect(sm) Service

This capability provides the Enhanced Service Provider (ESP) with a high speed data service that offers broadband switching over a wide geographic area. MegaConnect(sm) can be provided with either a lineside or trunkside interface.

GTE Product Name	BSE or CNS
MegaConnect(sm) Service	BSE

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. Customer premises are connected to the MegaConnect(sm) port via DS1 or DS3 Special Access Lines.
2. One MegaConnect(sm) address is assigned to each DS1 or DS3 service accessing the MegaConnectsm network.
3. A maximum of sixteen addresses can be assigned to each DS1 or DS3.
4. The MegaConnect(sm) Network will only transmit information between authorized users within a customer-defined closed user group. A closed user group is a set of source and destination addresses allowed to exchange data traffic in the MegaConnect(sm) network.
5. References:
 - o TR-TSV-000772, Issue 1, May 1991
 - o TR-TSV-000773, Issue 1, January 1993
 - o TR-TSV-001060, Issue 2, March 1993
 - o TR-TSV-001062, Issue 1, March 1993
 - o TR-TSV-001064, Issue 1, December 1992

MegaConnect(sm) is a service mark of GTE Telephone Operations

Message Waiting Indication - Ability To Receive Audible Ring Burst

This capability provides the ESP's client with the ability to receive ringing at a special cadence to signal the customer that a message is waiting. This reminder will be repeated at a specific interval programmed by the Telephone Company.

GTE Product Name	BSE or CNS
MWI - Ability to Receive Audible Ring Burst	CNS

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
GTD-5	1.7.1.1

2. The Audible Ring Burst feature is in addition to the stutter dial tone that normally represents a message waiting.

Multiplexing Arrangements

Multiplexing is a technique that uses a single transmission facility to provide several transmission channels, such as by sharing the time slots of the channel (time-division multiplexing) or superimposing many frequencies at the same time (frequency-division multiplexing) in order that many signal sources and links may communicate during a given time period. This capability may include multiplexing such as:

- DS0 To Subrates - This capability provides for the time division multiplexing of multiple digital data signals operating at the subrate speeds of 2.4 Kbps, 4.8 Kbps, or 9.6 Kbps with a 64 Kbps DS0 digital signal.
- Multiplexing - DS1/Analog or DS0 - This capability provides for the pulse code modulation and/or time division multiplexing of multiple analog voice and/or multiple 64 Kbps DS0 digital signals into a 1.544 Mbps data stream for the purposes of reducing the number of transmission links required between two points.
- Multiplexing - DS1 To DS0 - This capability provides for the time division multiplexing of up to twenty-four 64 Kbps DS0 digital signals into a 1.544 Mbps DS1 digital signal.
- Multiplexing - DS1 To Voice Grade - This capability provides for the pulse code modulation and time division multiplexing of up to twenty-four 4 kHz voice grade channels into a 1.544 Mbps DS1 digital signal.
- Multiplexing - DS3/DS1 - This capability provides for the time division multiplexing of up to twenty-eight 1.544 Mbps DS1 digital signals into a 44.736 Mbps DS3 digital signal.

GTE Product Name	BSE or CNS
Multiplexing Arrangements	BSE

References:

- o TR-TSY-000009 Asynchronous Digital Multiplexes Requirements and Objectives, Issue 1, May 1986.
- o TR-TSY-000010 Synchronous DS3 Add-Drop Multiplex (ADM 3/X) Requirements and Objectives, Issue 1, February 1988.

This service, if offered as a BSE, is associated with the Dedicated Voice Grade and the Dedicated High Capacity basic serving arrangements.

Remote Call Forwarding

This capability utilizes a Directory Number (DN) to automatically forward all incoming calls to another DN. The forwarded to number can be in the same central office switch or in another central office switch.

The remote call forwarding directory number is not directly associated with an access connection arrangement, but rather is a software translation programmed within the central office switch. All calls dialed to that directory number will forward to another number automatically. The subscriber to this capability does not have a station set for termination of calls make to their remote call forwarding number.

GTE Product Name	BSE or CNS
Remote Call Forwarding	BSE or CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	15.1
EWSD	9
GTD-5	1.6.2.1
DMS-10	404.2
1AESS	1AE9
5ESS	5E5
DMS-100	BCS30
#2EAX	1.2.9.1

2. Reference:

- o LSSGR (FR-NWT-000064), FSD 01-02-1402, Remote Call Forwarding, TR-TSY-000581, Issue 1, October 1989.

Saved Number Redial

This capability provides the ESP's client with the ability, at any point during a call, or upon encountering a busy or no-answer, to automatically save the called number by dialing an access code.

GTE Product Name	BSE or CNS
Saved Number Redial	CNS

FEATURE OPERATION:

To activate Saved Number Redial, the ESP's client dials an activation code of the form *XX at any point during a call or upon encountering a busy or no-answer.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
EWSD GTD-5	9 1.6.2.1

2. The ESP's client may place any number of calls after the number is stored and then may call the stored number by dialing another access code of the form *XX.

Signaling Arrangements

Signaling arrangements extend line circuit or signaling circuit alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. The signaling arrangement can be terminated on trunk-like or line side interfaces of the LEC switch. This capability may include signaling such as the following:

- Dual Tone Multifrequency Address Signaling - This option allows reception of called party address signals from the customer in the form of Dual Tone Multifrequency (DTMF) signals.
- Rotary Dial Station Signaling - This option provides for the transmission of called party address signaling from rotary dial stations for originating calls.
- Signaling System 7 (SS7) Out of Band Signaling - This option is provided in conjunction with Common Channel Signaling System 7 (CCS7) Access Service and provides common channel out of band transmission of address and supervisory SS7 protocol signaling information.
- Tandem Switch Signaling allows for the passing of the Carrier Identification Code (CIC) and the OZZ code or circuit code information needed to perform tandem switching functions.

GTE Product Name	BSE or CNS
Signaling Arrangements	BSE

FEATURE OPERATIONS:

See descriptions above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. DTMF Signaling is available with FGA or BSA-A.
2. Rotary Dial Signaling is available with FGB or BSA-B where conditions permit.
3. SS7 Signaling is available with Switched Access FGD or BSA-D service, 500 SAC Access, 800 SAC Access and 900 SAC Access Services and are available with the DS1 Digital, DS3 Digital interface arrangements. Tandem Switch Signaling is only available on FGD Switched Access, 500 SAC Access and 900 SAC Access services.
4. Tandem Switch Signaling is available with FGD Switched Access, 500 SAC Access, and 900 SAC

Access services and can only be provided from equal access end offices. This option is not available from end offices that use alternate technologies to provide equal access capabilities, or from Telephone Company access tandems.

This service, if offered as a BSE, is associated with the Circuit Switched Line or Circuit Switched Trunk basic serving arrangements.

Special Call Acceptance

This capability provides the ESP's client with the ability to select up to 12 customer telephone numbers from which calls are to be received. All other calls are intercepted and routed to a recorded announcement that informs the caller the customer is not accepting calls. Calls from numbers outside the specified LEC exchanges will ring normally.

GTE Product Name	BSE or CNS
Special Call Acceptance	CNS

FEATURE OPERATION:

See description above.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.2
EWSD	9
GTD-5	1.6.2.1
DMS-10	404.4
1AESS	1AE9
5ESS	5E9.1
DMS-100	BCS31